

Human evidence for health impacts of electronic cigarettes CVD

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The studies cited in this section that purport to show an increase risk to cardiovascular health have not assessed risks from e-cigarettes use, but harms from smoking and from past smoking history. Chen (2013) reports on 36 events that occurred as far back as 1980, this has no relevance to e-cigarettes as they were not invented at the time. Similarly, the studies by Qasim et al (2017), Vlachopoulos et al (2016), and Antoniewicz et al (2016) report on adverse effects of smoking. Another issue with some of the studies cited in this report is the assessing only of acute effects that disappear in a short time.

Since e-cigarettes do not contain tobacco and there is no combustion involved it stands to reason that those who switch to e-cigarettes will substantially reduce their exposure to the harmful chemicals found in the smoke from combustible tobacco. This is borne out in the evidence from a growing body of high-quality studies, including long term studies conducted over a number of years, which have found significant benefits to smokers who have switched from smoking to using e-cigarettes. As Farsalinos and Polosa said in their 2014 safety evaluation and risk assessment of e-cigarettes, *“Due to their unique characteristics, ECs represent a historical opportunity to save millions of lives and significantly reduce the burden of smoking-related diseases worldwide.”*

An assessment of the health impacts of e-cigarettes should include comparisons with the effects of smoking. The report fails to do this and has chosen instead to compare health impacts from vaping with non-smokers. The majority of e-cigarette users in the EU are former or current smokers (Farsalinos, K. E., Poulas, K., Voudris, V., and Le Houezec, J. 2016), and so the risks of vaping compared to those from continued smoking should be the focus for a health impact assessment of e-cigarettes.

The assumption made in the Opinion that the cardiovascular effects of nicotine obtained via smoking can also be applied to vaping does not stand to reason. The harms from smoking are due to combustion and not to nicotine. Long term epidemiological studies into using nicotine without combustion, such as in snus and NRT, show that nicotine does not pose any serious long-term risks. Lee (2013) carried out an evaluation of health effects of switching from cigarettes to snus. They concluded that *“the findings consistently demonstrate that switching from cigarettes to snus is associated with a clearly lower risk of CVD and cancer than in continuing to smoke. The risk in switchers is no different from that in smokers who quit smoking. The findings are consistent with other evidence that adverse health effects of snus are at most minimal.”*

Public Health England has been consistent in their message to smokers about the harm reduction potential of switching from smoking to vaping, and the need for accurate information of the relative risks to be conveyed to the public. In their comprehensive literature review in 2018 they stated that *“vaping poses only a small fraction of the risks of smoking and switching completely from smoking to vaping conveys substantial health benefits over continued smoking.”* With relation to cardiovascular risk and lung disease in particular they said, *“Comparative risks of cardiovascular disease and lung disease have not been quantified but are likely to be also substantially below the risks of smoking.”*

George et al (2019) found significant improvements in cardiovascular health in smokers that had completely switched to e-cigarettes. The conclusion of Benowitz et al (2016), a study cited in this opinion, was that completely substituting e-cigarettes for combustible tobacco would substantially reduce the harms from smoking, and result in a net benefit for cardiovascular health. A further study

by Benowitz (2017), also cited in this opinion, came to the same conclusion, stating: “the cardiovascular risk of EC use is likely to be much less than that of cigarette smoking”

References

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